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The Influence of the Agricultural Development Program in Achieving Sustainable Development Goals in Tanete Rilau District, Barru Regency: Quantitative Analysis with SPSS 26

Mukmin Muhammad
STIA Al Gazali Barru
mukmintomy48048@gmail.com
Masyitah
STIA Al Gazali Barru
masyitah@algazali.ac.id

ABSTRACT

This article aims to identify the influence of agricultural development programs on achieving sustainable development goals in Tanete Rilau District, Barru Regency. A quantitative approach was used in this research by analyzing survey data collected from farmers in the region. The analysis was carried out using SPSS 26 software. The results show a positive relationship between farmer participation in agricultural development programs and the achievement of several sustainable development indicators, such as increasing income, food security and reducing poverty. These findings provide valuable insights for local governments and other stakeholders to design more effective policies in supporting sustainable agriculture in Barru Regency, as well as making a greater contribution to achieving overall sustainable development goals. In addition, this article also highlights the challenges and opportunities faced in implementing agricultural development programs at the local level, as well as offering policy recommendations to increase the effectiveness and positive impact of these programs. Thus, it is hoped that this research can become the basis for strategic steps in efforts to achieve sustainable development in Barru Regency and other similar areas.

Keywords: Development, Sustainable, Agriculture, Quantitative, SPSS 26.

A.INTRODUCTION

1. Background of the Problem

According to Simamora (2006:67)(Andi Ariadi, 2019), stated that development is a change towards patterns enabling society better realization of values humanity, which makes it possible a society has greater control over the environment and goals its politics, and what makes it possible its citizens gain control more towards themselves.Sustainable development is the main focus for many countries in the world today, considering increasingly complex environmental, social and economic challenges. Development so far has been carried out by placing the community as an object of development that receives all programs from the central government only, known as the old paradigm of rural development. The new paradigm places more emphasis on empowering rural communities that are more focused on communities and development institutions in villages such as LPM and LKD which are built in a participatory manner. This new paradigm as empowerment is development that is made in a democratic, decentralized and participatory manner. The village community should occupy the main position that initiates, manages and enjoys rural development. In this case the State is sufficient as a facilitator and provides a conducive space for the growth of initiatives, participation of local community members and village development institutions as partners of the village government in rural development (A.Pananrangi, 2023).

Achieving the Sustainable Development Goals (SDGs) is a global priority to ensure the welfare of humans and the planet. In the Indonesian context, Barru Regency has a significant role in efforts to achieve sustainable development goals, especially in the agricultural sector. Agriculture in Barru Regency is not only a source of livelihood for the majority of the population, but also has great potential to make a substantial contribution to achieving the SDGs. Previous research has highlighted several important aspects related to agriculture in the region, but there is still a need for a deeper understanding of the contribution of agricultural development programs to sustainable development goals. Therefore, this article aims to fill this knowledge gap by quantitatively analyzing the impact of agricultural development programs on achieving SDGs in Barru Regency. Thus, it is hoped that this research can provide valuable insights for development

policies at the local level and make a significant contribution to efforts to achieve overall sustainable development goals.

Emphasis on the agricultural sector in the context of sustainable development in Tanete Rilau District, Barru Regency is essential considering the geographical and demographic characteristics of the region. Tanete Rilau District, Barru Regency is located in South Sulawesi Province, which has great agricultural potential. However, obstacles such as climate change, land degradation and limited resources present their own challenges for sustainable agricultural development in this region. Therefore, this research will not only strengthen understanding of the contribution of agriculture to the SDGs in general, but will also provide specific insights into how local factors influence the dynamics of sustainable development.

In addition, the historical and socio-economic context of Barru Regency also plays an important role in understanding the challenges and opportunities for sustainable development in this region. As an agricultural region with a long history of agricultural culture, changes in the social and economic structure of local communities have significant implications for agricultural development strategies and the achievement of SDGs. Therefore, in formulating policy recommendations, it is important to consider the social and cultural dynamics that influence community participation in sustainable development programs.Barru Regency is a district in South Sulawesi Province which also has various local wisdom and traditions. which is dominated by the Bugis population. Barru residents generally still depend on the agricultural sector for their livelihood. Of all the agricultural sectors, the majority work as rice farmers who produce paddy or rice production. From production it is the mainstay of income to cover food needs and various other needs (Asriani,Pananrangi, 2022).

This research also has important relevance in a global context, because sustainable development is a universal agenda that involves cooperation between countries and across sectors. By understanding how agricultural development programs contribute to achieving sustainable development goals in Barru District, this research can provide valuable learning for other countries facing similar challenges in realizing their sustainable development vision.Masyitah (2019) states that the regulatory authority is very personal-family in nature and the government mechanisms implemented depend on the mechanisms implemented in the family system. In contrast to the concept of patrimonialism, according to Weber, modern government is based on rules based on a

rational legal bureaucracy, namely a bureaucracy that not only prioritizes the individual but also refers to procedures that are formulated together within an organization so that it can separate what is private and what is private.

2.Framework Of Thinking

A framework of thinking is a research basis that includes a combination of theory, observation, facts, and literature review which will be used as a basis for carrying out scientific writing. Therefore, a thinking framework is created when explaining research concepts (Aminah,Muhammad & Ismail, 2024).In general, a conceptual framework is a conceptual model that will be used by researchers regarding the things being researched, including explaining the focus of the research that will be researched, including explaining the focus of the research that will be researched and the influence between the research focuses (Aminah,Muhammad & Ismail, 2024).

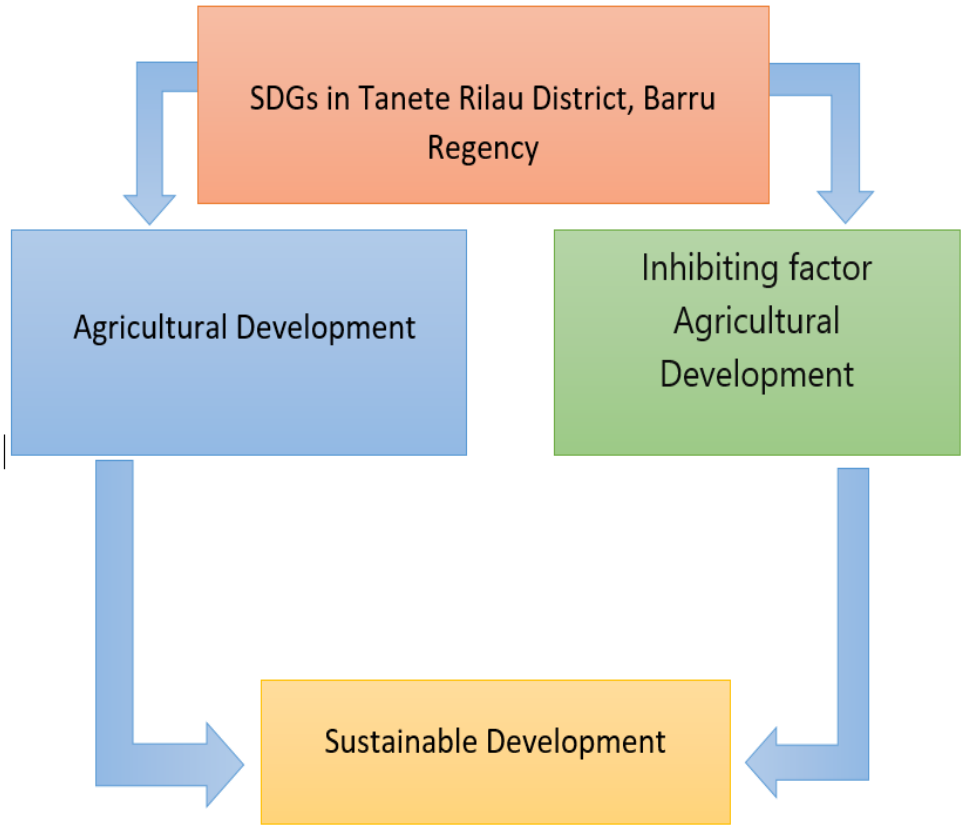

Figure 1 Framework of Thought

3.Hypothesis

According to Sugiyono (2018) a hypothesis is a temporary answer to a research formulation. This research was conducted to determine the influence of agricultural development on sustainable development. It is assumed that agricultural development has an influence on sustainable development. The following is the formulation of the hypothesis from this research:

H0: There is no influence between agricultural development and sustainable development.

H1: There is an influence between agricultural development and sustainable development.

B.RESEARCH METHODS

A research will run well and be directed if it has the correct methodology, which can properly direct the research (Ismail, 2022). In this research the author uses a quantitative research approach method, namely research based on discoveries that can be achieved using statistical or measurement procedures, to research certain populations or samples, data collection, using research instruments, quantitative or statistical analysis with the aim of to test the established hypothesis. This type of research is quantitative descriptive. Quantitative research methods use numerical data and emphasize the research process on measuring objective results using statistical analysis. The focus of quantitative methods is to collect data sets and generalize them to explain specific phenomena experienced by the population (Muliati et al., 2020). Research Location This research was conducted in Tanete Rilau District, Barru Regency.

Population and Sample

a. Population

Population is the entire group of people, events, or anything of interest that you want to study. The population to be studied must be clearly defined before the research is carried out. Characteristics here are interpreted as traits that you want to know or observe in a study. In this study, the population is farmers in Tanete Rilau District, Barru Regency. The population in this study is 5000 people.

b. Sample

A sample is a portion of the population taken as a data source using a certain method so that the data can represent the entire population as a whole. In line with the opinion of (Sugiyono, 2018) which says that the sample is part of the number and characteristics of the population. The technique for determining the sample can use the Slovin formula as follows: n = N/N. (e) 2 + 1 Where n is the number of samples selected, N is the total population and e is the percent allowance for inaccuracy in sampling. So, it is known that the number of samples in this study with an error rate of 10% is: n = 5000 /5000.(0.1)2 + 1 = 98.4 rounded up to 100 people. Based on the calculations above, a sample of 100 respondents was obtained. The sampling technique used in this research is Non Probability Sampling, namely a sampling technique that does not provide equal opportunities for each element or member of the population to be selected as a sample. (Sugiyono, 2018). Which says that the sample is part of the number and characteristics of the population. The technique for determining the sample can use the Slovin formula as follows: n = N/N. (e) 2 + 1 Where n is the number of samples selected, N is the total population and e is the percent allowance for inaccuracy in sampling. So, it is known that the number of samples in this study with an error rate of 10% is: n = 5000 /5000.(0.1)2 + 1 = 98.4 rounded up to 100 people. Based on the calculations above, a sample of 100 respondents was obtained. The sampling technique used in this research is Non Probability Sampling, namely a sampling technique that does not provide equal opportunities for each element or member of the population to be selected as a sample (Sugiyono, 2018). Considering that the population is relatively large in number, the sampling technique used is used is Incidental Sampling. Incidental sampling is a technique for determining samples based on chance, that is, anyone who happens to meet the researcher can be used as a sample, if it is deemed that the person they meet by chance is suitable as a data source. (Sugiyono, 2018).

C. RESEARCH RESULTS AND DISCUSSION

1) Description of Research Location

Barru Regency is one of the regencies on the west coast of South Sulawesi Province, located between coordinates 40o5'49" – 40o47'35" south latitude and 119o35'00" – 119o49'16" east longitude with an area of 1,174.72 km2. approximately 100 km north of Makassar City and 50 km south of Parepare City with a coastline of 78 km.Barru Regency is on the Trans Sulawesi route and is a cross-tourism area between Makassar City and Tana Toraja Regency as a tourist

destination and is in the Parepare Integrated Economic Development Area (KAPET). The population based on the results of the 2009 Population Census was 162,985 people with an average density of 138.74 people/km2. The per capita income of Barru Regency residents in 2009 was IDR. 9,705,963,- (Barrukab.go.id 2022).

The journey from Makassar to Barru Regency can be taken in 1.5 hours and from Parepare City to Barru Regency in 45 minutes. Barru Regency borders the city of Parepare and Sidrap Regency to the North, Soppeng Regency and Bone Regency to the East, Pangkep Regency to the South and the Makassar Strait to the West. Barru Regency is located on the West Coast of South Sulawesi, approximately 100 km north of the City Makassar. Geographically, it is located at coordinates 4o05'49" LS – 4o47'35" LS and 119o35'00″E – 119o49'16″E. To the north Barru Regency borders Parepare City and Sidrap Regency, to the east it borders Soppeng Regency and Bone Regency, to the south it borders Pangkep Regency and to the west it borders the Makassar Strait. Area Area. Barru Regency covers an area of 1,174.72 km2, divided into 7 sub-districts, namely: Tanete Riaja District covering an area of 174.29 km2, Tanete Rilau District covering an area of 79.17 km2, Barru District covering an area of 199.32 km2, Soppeng Riaja District covering an area of 78.90 km2, Subdistrict Mallusetasi covers an area of 216.58 km2, Pujananting District covers an area of 314.26 km2, and Balusu District covers an area of 112.20 km2. Apart from land, there is also a territorial sea area of 4 miles from the coast with a length of 78 km. Regional Morphology.

Based on the slope, the Barru Regency area is divided into four morphological criteria, namely flat with a slope of 0-2o covering an area of 26.64%, sloping with a slope of 2-15o covering an area of 7,043 ha or 5.49%, sloping with a slope of 15-40o covering an area of 33,346 ha or 28 .31%, and steep with a slope of >40o covering an area of 50,587 ha or 43.06% spread over all sub-districts. Tanete Rilai District is the location for this research using quantitative research methods. Geological Conditions. Soil types in Barru Regency consist of: Alluvial covering an area of 14,659 ha (12.48%) found in Kec. Tanete Riaja; Litosol covers an area of 29,034 ha (24.72%) in Kec. Tanete Rilau and Tanete Riaja; Regosol covering an area of 41,254 ha (38.20%) is found in all sub-districts; and Mediterranean types covering an area of 32,516 (24.60%) (Barrukab.go.id 2022)

2). Research result

a) Process the data with SPSS 26

1) Validity and Reliability Test

The validity test uses the SPSS Version 26 for Windows application to obtain the results of each question used to measure the Agricultural Development variable (X) and the Development Goal Variable (Y) in this research article.

An instrument is said to be valid if it is able to measure what it wants to measure from the variables studied. The technique used for this validity test is brivariate preason (product moment preason) with a significance level of 0.05 carried out by correlating the score of each item with the total score. Then the correlation value (r Calculated) that has been obtained is compared with the correlation value in the table (r Table). If the value of r Calculated is greater than r Table it means the variable can be declared valid.

In this research, it is known that the r table is at a significance level of 0.05 or 5% with the amount of data (N) = 100 or df = N-2 = 8, so the r table can be 0.6319. Based on this, it can be seen from the results of the validity test for Agricultural Development (X) as follows.

- If r Table > r Count then the variable is declared invalid

- If r Table < r Count then the variable is declared valid.

If you look at the Significance (Sig.)

- If the significance value < 0.05 = valid

- If the significance value is > 0.05 = Invalid

Table 1. Validity Test Results for Agricultural Development Variables (X)

No. Item	r hitung	r tabel	Keterangan
Item 1	0.582	0.631	Valid
Item 2	0.793	0.631	Valid
Item 3	0.601	0.631	Valid
Item 4	0.615	0.631	Valid
Item 5	0.759	0.631	Valid
Item Quantity	1	0.631	Valid

Source: Processed SPSS output, 2024

Based on table 1, the validity test shows that all instruments from the Agricultural Development table (X)which consists of x1, x2, x3, x4 and x5 all produce the value r Table < r Calculate then all calculation results are declared valid.

Table 2. Results of the Validity Test of Development Goals(Y)

No. Item	r hitung	r tabel	Keterangan
Y1	0.866	0.631	Valid
Y2	0.803	0.631	Valid
Y3	0.749	0.631	Valid
Y4	0.769	0.631	Valid
Y5	0.688	0.631	Valid
Item Quantity	1	0.631	Valid

Source: Processed SPSS output, 2024

Based on table 2, the validity test shows that all instruments from the Development Goals (Y) table consisting of Y1, Y2, Y3, Y4 and Y5 all produce a value of r Table < r Calculate then all calculation results are declared valid.

The results of observations in the r table show that the value for the sample (N) = 8 is 0.6319. referring to the validity results, it was produced that all instruments starting from the Agricultural Development (X) variable consisting of x1, x2, x3, x4, x5 and the Development Goals (Y) variable consisting of y1, y2, y3, y4, y5 produced a value of r Calculate > r Table so that it can be concluded that all instruments in this research can be declared valid.

2) Reliability Test

The reliability test is used to find out whether the statements in the research questionnaire are consistent or not if the measurements are carried out repeatedly. Basis for decision making Cronbach's Alpha Reliability Test according to V. Wiratna Sujarweni, 2020), The questionnaire is declared reliable if the Chonbach's Alpha value is > 0.70.Widiyanto & Yunianta, (2021), explains that the basis for decision making in reliability testing is as follows:

1) If the Cronbach's Alpha value > r Table then the questionnaire is declared reliable.

2) If the Cronbach's Alpha value < r Table then the questionnaire is declared unreliable.

Table 3. Reliability Test for Agricultural Development Variables t (X) and Development Goals (Y)

Case Processing Summary

		N	%
Cases	Valid	100	100.0
	Excluded[a]	0	.0
	Total	100	100.0

Source: Processed SPSS output, 2024

Based on table 3 above, it provides information about the number of samples or respondents (N) analyzed in the SPSS program, namely N, 10 respondents. Because there is no empty data (all respondents' answers are filled in) the total is 100% valid.

Table 5. Reliability Test of Agricultural Development Variables (X)

Reliability Statistics

Cronbach's Alpha	N of Items
.866	5

Source: Processed SPSS output, 2024

Based on table 5 above, it is known that the N of Items (questionnaire) contains 5 questions with a Cronbach's Alpha value of 0.866 > 0.70 and a Cronbach's Alpha value of 0.866 > r Table 0.6319, so as is the basis for decision making in the reliability test above, it can be concluded that the 5 questions or all questionnaire items for the Agricultural Development variable (X) are reliable or consistent.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X1	16.4000	4.711	.777	.824
X2	16.5000	4.500	.913	.797
X3	16.3000	4.900	.700	.841
X4	16.4000	4.711	.777	.824
X5	18.0000	3.556	.593	.925

Source: Processed SPSS output, 2024

Based on table 5 above, it provides an overview of the statistical value of the 5 question questionnaires. In the Cronbach's Alpha If Item Deleted column for the 5th questionnaire, the Cronbach's Alpha value is > 0.70 and the Cronbach's Alpha value is > r. Table 0.6319 means it can be concluded that all 5 questionnaires are reliable.

Table 6. Reliability Test of Development Goals (Y)

Reliability Statistics

Cronbach's Alpha	N of Items
.023	5

Source: Processed SPSS output, 2024

Based on table 6 above, it is known that the N of Items (questionnaire) has 5 questions with a Cronbach's Alpha value of 0.831 > 0.70 and a Cronbach's Alpha value of 0.831 > r Table 0.6319, so as is the basis for decision making in the reliability test above, it can be concluded that the 5 questions or all questionnaire items for the Development Goals (X) variable are reliable or consistent.

Table 7. Reliability Test of the Development Goal Variable (Y)

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X1	16.4000	4.711	.777	.824
X2	16.5000	4.500	.913	.797
X3	16.3000	4.900	.700	.841
X4	16.4000	4.711	.777	.824
X5	18.0000	3.556	.593	.925

Source: Processed SPSS output, 2024

Based on table 7 above, it provides an overview of the statistical value of the 5 question questionnaires. In the Cronbach's Alpha If Item Deleted column for the 5 question questionnaires, the Cronbach's Alpha value is > 0.70 and the Cronbach's Alpha value > r Table, it can be concluded that all 5 question questionnaires are reliable.

Based on the table of variables for Agricultural Development (X) and Development Goals (Y) above, it is known that there are N Of Items (Number of Questionnaires) there are 5 items with a Cronbach's Alpha of 0.866 for the variable Agricultural Development (X) and 0.831 for the variable Development Goals (Y). . Because the Cronbach's Alpha value is 0.866 > 0.70, as a basis for decision making in the Wiratna Sujeweni Reliability Test, it can be concluded that the 5 questions for the Agricultural Development variable (X) are reliable (constant). Likewise,

the Cronbach's Alpha value of 0.831 > 0.70 can be concluded that the 5 questions for the Development Goals (Y) variable are reliable (constant).

Based on test decision making, the Cronbach's Alpha value is compared to the r table value. Because the Cronbach's Alpha value is 0.866 > 0.6319 (r Table) it is concluded that the Agricultural Development Questionnaire (X) is declared reliable or reliable and Cronbach's Alpha is 0.831 > 0.6319 (r Table) so it is concluded that the Development Objectives questionnaire (X) is stated reliable or trustworthy as a data collection tool in research.

3) Normality Test

The normality test is used to determine whether the data population is normally distributed or not. This test is usually used to measure ordinal, interval or ratio scale data. If the analysis uses parametric methods, then normality requirements must be met, namely that the data comes from a normal distribution. If the data is not normally distributed, or the number of samples is small and the data type is nominal or ordinal, then the method used is non-parametric statistics. In this discussion, the One Sample Kolmogorov-Smirnov test will be used using a significance level of 0.05. Data is declared normally distributed if the significance is greater than 5% or 0.05.

Table 8. Normality Test for Agricultural Development Variables (X) and Development Goal Variable (Y)

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.33388057
Most Extreme Differences	Absolute	.343
	Positive	.232
	Negative	-.343
Test Statistic		.343
Asymp. Sig. (2-tailed)		.001[c]

Source: Processed SPSS output, 2024

From the table above 8, the probability number or Asymp is obtained. Sig (2-tailed). This value is compared with 0.05 (because it uses a significance level of 5%) for decision making using the following test criteria:

- If Asymp. Sig (2-tailed) < 0.05 means the data distribution is not normal
- If Asymp. Sig (2-tailed) > 0.05, then the data distribution is normal.

From the table above, it can be seen that the value of Asymp. Sig (2-tailed) > 0.05, namely 0.189 > 0.05, which means that all data is normally distributed.

4) Linearity Test

The linearity test aims to find out whether two variables have a linear relationship or not significantly. This test is usually used as a prerequisite in correlation or linear regression analysis. Testing on SPSS uses the Test for Linearity with a significance level of 0.05. Two variables are said to have a linear relationship if the significance (Linearity) is less than 0.05.

Table 9. Linearity Test for Agricultural Development Variables (X) and Development Goals (Y)

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Development Goal * Agricultural Development	Between Groups	(Combined)	19.067	3	6.356	3.365	.096
		Linearity	14.387	1	14.387	7.617	.033
		Deviation from Linearity	4.680	2	2.340	1.239	.355
	Within Groups		11.333	6	1.889		
	Total		30.400	9			

Source: Processed SPSS output, 2024

From the table above for the 9 outputs above, it can be seen that the significance value for Linearity is 0.033 < 0.05. Because the significance is less than 0.05, it can be concluded that between the Agricultural Development variable and the Development Goal variable there is a linear relationship.

5) Simple Linear Regression Test

Simple Linear Regression Analysis is a linear relationship between one Agricultural Development variable (X) and the Development Goal variable (Y). This analysis is to determine the direction of the relationship between variables.

Table 10. Simple Linear Regression Test Agricultural Development Variable (X) And Development Goals (Y)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.387	1	14.387	7.188	.028[b]
	Residual	16.013	8	2.002		
	Total	30.400	9			

Source: Processed SPSS output, 2024

From table 10 the output shows that the calculated F is 7.188 with a significance/probability level of 0.028 < 0.05, so the regression model can be used to predict the Agricultural Development variable or in other words there is an influence of the Agricultural Development variable (X) on the Development Goal variable (Y).

Table 11. Simple Linear Regression Test for Agricultural Development Variables (X) And Development Goals (Y) Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.688[a]	.473	.407	1.415

Source: Processed SPSS output, 2024

From table 11, the R value is the symbol for the coefficient. In the table above the correlation value is 0.688. From the table above, an R Square value of 0.473 is also obtained, which shows how good the regression model is formed by the interaction of the independent variable and the dependent variable. The value obtained is 47.3%. So it can be interpreted that variable X has a contributing influence of 47.3% to variable Y.

6) Hypothesis Testing

Hypothesis testing in this research uses the F test. The F test is carried out to prove the simultaneous influence of the independent variable on the dependent variable. The F test results can be seen in the table below:

Table 11. Hypothesis Test (F Test)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.387	1	14.387	7.188	.028[b]
	Residual	16.013	8	2.002		
	Total	30.400	9			

Source: Processed SPSS output, 2024

The hypothesis formulation of this research is:

H0: There is no influence between Agricultural Development and Development Goals

H1: There is an influence between Agricultural Development and Development Goals.

If the probability of significance is > 0.05, then H0 is accepted and H1 is rejected, if the probability of significance is <0.05, then H0 is rejected and H1 is accepted. Based on the table above, the calculated F is 7.188 with a probability of significance of 0.028, which is a value below 0.05. This shows that all independent variables, namely Agricultural Development, have a significant effect simultaneously (together) on Development Goals. Thus, H0 is rejected and H1 is accepted, namely that agricultural development influences Development Goals.

2).Obstacle factor

Based on the results of direct observations in Tanete Rilau District regarding the factors that hinder agricultural development, namely:

(a). Infrastructure limitations

To understand the factors that hinder agricultural development in Tanete Rilau District based on direct observations, we can analyze several aspects that often become obstacles in the development of the agricultural sector. Some factors commonly encountered in various agricultural contexts include:

Limited infrastructure is one of the main factors hampering the development of the agricultural sector in Tanete Rilau District. One of the most critical aspects is the lack of an adequate irrigation system, which has a significant impact on the irrigation of agricultural land,

especially during the dry season. This condition causes many agricultural lands not to get enough water, thereby reducing plant productivity. In addition, poor road infrastructure further aggravates this situation. Inadequate roads make it difficult for farmers to access markets, so their crops cannot be sold optimally and are often damaged during transportation. This not only increases transportation costs but also results in a decrease in the quality and selling value of agricultural products. As a result, limited infrastructure has become a serious obstacle to agricultural progress in this region, demanding attention and solutions from various related parties to improve this condition.

(b). Limited access to technology and information

Limited access to technology and information is a significant obstacle in agricultural development in Tanete Rilau District. Farmers often do not have access to modern agricultural technology, such as agricultural machinery, superior seed varieties, and effective fertilizers and pesticides. This lack of access results in low efficiency and productivity in farming activities. In addition, lack of adequate information regarding best agricultural practices, market conditions and climate change are also major inhibiting factors. Farmers do not gain sufficient knowledge about more productive and sustainable agricultural techniques, and are unable to anticipate market and climate changes that can affect their crop yields. This limited access, both in terms of technology and information, significantly hampers farmers' ability to increase their productivity and welfare, thus requiring appropriate intervention from related parties to overcome this problem.

(c). Capital and financing

Capital and financing are crucial factors that often become obstacles in developing the agricultural sector in Tanete Rilau District. Farmers often face difficulties in obtaining credit or loans for business capital due to complex procedures and strict requirements. Complicated administrative processes and high guarantees mean that many small farmers are unable to qualify for the funds needed to improve their farming operations. In addition, the unequal distribution of subsidies and assistance from the government or related institutions further worsens the situation. Many farmers do not receive the assistance they should receive, or receive insufficient amounts, making it difficult for them to purchase agricultural inputs such as seeds, fertilizer and agricultural tools. These limitations in access to capital and financing have a negative impact on farmers' ability to increase their productivity and welfare, highlighting the need for reforms in financing policies and aid distribution to make them more inclusive and effective.

(d). Skills and education

Skills and education are important elements that influence agricultural productivity in Tanete Rilau District. The lack of training and counseling programs for farmers is one of the main obstacles in improving their skills and knowledge regarding more efficient and sustainable farming techniques. Without adequate training, farmers tend to stick with traditional methods that are less productive. Additionally, low levels of education among farmers hinder their ability to adopt new technologies and implement better agricultural management. Insufficient education makes it difficult for farmers to understand and apply complex technical information and innovations needed to increase agricultural yields. Therefore, increasing access to comprehensive education and training programs is essential to empower farmers to optimize their agricultural practices and improve economic prosperity in the region.

(e). Natural and environmental conditions

Natural and environmental conditions have a significant impact on agricultural development in Tanete Rilau District. Climate change and weather uncertainty can affect cropping patterns and agricultural production results, resulting in variability in the availability and quality of crops. Farmers often struggle to plan optimal planting seasons due to unpredictable changes in rain patterns and temperatures, which can lead to crop failure and economic losses. In addition, declining soil quality due to overuse and environmental degradation is an additional challenge that hampers productivity. Excessive use of land without adequate conservation efforts causes a decrease in soil fertility and reduced agricultural land productivity. The limited availability of water resources also worsens the situation, considering that water is an essential factor for plant growth. The combination of these factors emphasizes the importance of holistic adaptation and mitigation strategies to face the challenges of climate change as well as soil and water conservation to support agricultural sustainability in this region.

(f). Marketing and supply chains

Marketing and supply chains are significant challenges in agricultural development in Tanete Rilau District. Farmers often face difficulties in selling their crops at reasonable prices due to limited access to markets. These barriers include long distances, poor road infrastructure, and lack of adequate market facilities, which overall reduce farmers' ability to reach consumers efficiently. In addition, the dominance of middlemen or middlemen in the supply chain exacerbates

this condition. Middlemen often take large profit margins, resulting in the prices farmers receive for their products being very low. This situation not only reduces farmers' income but also affects the sustainability of their agricultural businesses. Therefore, effective interventions are needed, such as developing market infrastructure, improving transportation access, and promoting direct marketing systems or cooperatives, to ensure farmers get fairer prices and improve their economic welfare.

(g). Social and cultural

Social and cultural aspects play an important role in agricultural development in Tanete Rilau District. Farmers' tendency to maintain less productive traditional practices often hinders the adoption of more efficient and innovative farming methods. This resistance to change can be caused by a lack of information, distrust of new technology, or deeply rooted cultural values. Apart from that, involvement and cooperation between farmers in forming farmer groups or cooperatives is still underdeveloped. In fact, the formation of farmer groups or cooperatives can increase their bargaining power in the market, enable better access to resources, and increase efficiency and productivity through sharing knowledge and experience. Therefore, efforts to overcome these obstacles need to focus on education and extension that is sensitive to the local cultural context, as well as encouraging initiatives that strengthen solidarity and cooperation in agricultural communities.

3). Discussion

(a).Process the data with SPSS 26

In this research, validity and reliability tests were carried out to confirm the validity and consistency of the instruments used. The validity test uses the Pearson brivariate technique with a significance level of 0.05 for the variables Agricultural Development (X) and Development Goals (Y) using SPSS Version 26. The results show that all instruments for these two variables can be declared valid because the calculated r value is greater than the r table.

Next, a reliability test was carried out by measuring the consistency of the statements in the questionnaire. The results show that the Cronbach's Alpha value for the Agricultural Development (X) variable is 0.866 and for the Development Goals (Y) variable is 0.831, all of which are greater than the reliability threshold value of 0.70. This confirms that all questions in the questionnaire are reliable and consistent.

A normality test was also carried out to determine the distribution of the data. The results show that all data are normally distributed with a significance level greater than 0.05. Then, a linearity test was also carried out to determine the linear relationship between the variables Agricultural Development (X) and Development Goals (Y), which showed that there was a significant linear relationship.

The good reliability and validity test results, together with the normal distribution and significant linear relationships, provide strong support for the reliability of the data collected and the analysis carried out in this research, ensuring that the findings and conclusions drawn are well-founded and can be trusted.

(b). Obstacle factor

In the context of agricultural development in Tanete Rilau District, a number of important factors are the main obstacles that hinder the progress of the agricultural sector. One crucial factor is limited infrastructure, especially visible in the lack of adequate irrigation systems and poor road conditions. This affects crop productivity and farmers' access to markets, causing transportation costs to increase and crops to often be damaged during transportation. In addition, limited access to modern agricultural technology and information on best agricultural practices is also a significant obstacle in increasing agricultural efficiency and productivity.

Capital and financing constraints are also a serious problem in Tanete Rilau District. The complex process and strict requirements for obtaining credit or business capital loans, along with the unequal distribution of subsidies, mean that farmers have difficulty obtaining the necessary funds. This hampers their ability to improve their farming efforts, such as purchasing superior seeds or modern equipment that can increase efficiency. Apart from that, the lack of training and extension programs also hinders increasing farmers' skills and knowledge about more efficient and sustainable farming techniques.

Furthermore, unstable natural and environmental conditions, including climate change and weather uncertainty, are important factors affecting agricultural productivity and sustainability. Unpredictable weather variability can cause crop failure and economic losses, while environmental degradation and reduced soil quality due to overuse also suppress agricultural land productivity.

The combination of these factors shows the importance of adaptation and mitigation strategies to maintain agricultural sustainability in this area.

Social and cultural aspects also have a significant impact on agricultural development. The tendency to maintain less productive traditional practices and resistance to change or new innovation hinders efficiency and increased productivity. Apart from that, the lack of involvement and cooperation between farmers in the form of farmer groups or cooperatives also reduces their bargaining power in the market. This emphasizes the need for education and extension that is sensitive to local culture, as well as initiatives to strengthen agricultural community cooperation to overcome these obstacles in agricultural development in Tanete Rilau District.

D.CONCLUSIONS AND RECOMMENDATIONS

1. CONCLUSIONS

Analysis of factors inhibiting agricultural development in Tanete Rilau District shows that there are a number of challenges that need to be overcome to increase productivity and sustainability of the agricultural sector. Limited infrastructure, limited access to technology and information, capital and financing constraints, unstable natural and environmental conditions, as well as social and cultural factors are the main obstacles that influence agricultural progress in the region.

2. RECOMMENDATIONS

To overcome these obstacles, comprehensive efforts are needed from various related parties. First, greater investment needs to be made in infrastructure, especially adequate irrigation systems and improved roads to markets. This will help improve farmers' access to resources and markets, as well as reduce losses during transportation.Broader and more focused education and training programs are needed to improve farmers' skills and knowledge about modern and efficient agricultural practices. In addition, better access to agricultural technology and market information also needs to be improved.

In terms of capital and financing, there needs to be policy reform that is more inclusive and supportive for small farmers. Complicated administrative processes need to be simplified, and access to credit or business capital loans must be improved with more flexible terms.Climate change adaptation and mitigation strategies as well as nature conservation need to be improved. This includes the development of climate-resilient agricultural technologies and soil and water conservation programs to maintain agricultural land productivity.It is necessary to increase cooperation between farmers through the formation of farmer groups

or cooperatives. This will increase farmers' bargaining power in the market, allowing them to obtain fairer prices, as well as share knowledge and experience to increase efficiency and productivity.

By implementing these suggestions, it is hoped that there will be significant improvements in agricultural development in Tanete Rilau District, which will ultimately have a positive impact on the welfare of farmers and the sustainability of the agricultural sector as a whole.

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